REMARKS

Claims 1-68 are pending in this case. In the amendment hereinabove, independent claims 1, 18, 35 and 52 have been amended. Based upon the following remarks, it is respectfully submitted that, in conformance with the foregoing amendment, all claims are allowable.

A. §112 Rejections

Claims 1-17 and 35-51 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. This rejection is respectfully traversed and it is submitted that these claims are in conformance with 35 U.S.C. §112.

As noted by the Examiner, these claims recite "an X-ray detection system responsive to at least one detection control signal and for placement ...". According to the Examiner, this language is unclear as to whether such "responsiveness" is in relation to movement of the "X-ray detection system" or mere placement of the "X-ray detection system". It is respectfully submitted that the recited "responsiveness" is clearly recited (as currently amended) as "by providing said emission and detection control signals, wherein, in relation to a sub-portion of said first image signal corresponding to said sub-portion of said subject, said second image signal differs from said first image signal in one or more of a plurality of image characteristics" (emphasis added). As for the recitation "for placement", that is simply to provide context for the recited structure(s) and function(s) of the claim.

Claims 2, 4, 36 and 38 were rejected under 35 U.S.C. §112, second paragraph, with reference to M.P.E.P. § 2172.01, as being incomplete for omitting essential elements, i.e., a collimator. This rejection is respectfully traversed and it is submitted

that these claims are in conformance with 35 U.S.C. §112.

It is respectfully submitted that one of ordinary skill in the art understands that an X-ray emission system used as part of "an automated X-ray imaging system for producing a plurality of X-ray imaging signals" (preamble of claim 1) would include one or more of a number of constituent elements or components for providing doses of X-ray radiation which differ in one or more of a number of X-ray radiation characteristics (as recited in the claims), e.g., including a collimator for collimation since it is well known that for X-ray radiation to be used effectively it must generally be directed as opposed to be allowed to radiate in any and all directions. (Another example of a constituent element or component that need not be expressly claimed would be a power source.)

Claims 19, 21, 53 and 55 were rejected under 35 U.S.C. §112, second paragraph, with reference to M.P.E.P. § 2172.01, as being incomplete for omitting essential steps, i.e., controlling a collimator. This rejection is respectfully traversed and it is submitted that these claims are in conformance with 35 U.S.C. §112. The remarks immediately hereinabove regarding claims 2, 4, 36 and 38 address this issue and incorporated herein by reference.

B. §102 Rejection – *Alving et al.*

Claims 1-4, 9-21, 31-38, 43-55 and 65-68 were rejected under 35 U.S.C. §102(e) as being anticipated by Alving et al., U.S. Patent No. 6,594,339 ("*Alving et al.*"). This rejection is respectfully traversed and it is submitted that these claims, in conformance with the foregoing amendment, recite subject matter which is not anticipated by and is patentable over *Alving et al.*

Independent claims 1, 18, 35 and 52 have been amended hereinabove to more clearly emphasize a novel feature of the presently claimed invention, especially in

view of *Alving et al.* More particularly, e.g., as expressly recited in claim 1 (with emphasis added), the presently claimed invention includes:

> a control system, coupled to said X-ray emission and detection systems, responsive to at least said first image signal by providing said emission and detection control signals, wherein, in relation to a portion of said first image signal corresponding to said sub-portion of said subject, said second image signal differs from said first image signal in one or more of a plurality of image characteristics.

Hence, control by the "control system" is based upon a portion of the first image signal corresponding to the sub-portion of the subject. In other words, in conformance with the discussion in paragraphs [00019] and [00020] of the present disclosure, in the described embodiment, control is based upon the region of interest (ROI) within the subject as determined, by the "control system", from the image data within the ROI.

This is in contrast to the control exercised in the apparatus of *Alving et al.* in which the entire initial image signal is used to determine how subsequent exposure of the subject to be performed: "The exposure control calculates the mean intensity across the measuring field on the basis of the test image (images)." *Alving et al.* at column 7, lines 54-56.

C. §102 Rejection – *Milnes et al.*

Claims 1-2, 5-16, 18-19, 22-33, 35-36, 39-50, 52-53 and 56-67 were rejected under 35 U.S.C. §102(e) as being anticipated by Milnes, U.S. Patent No. 6,463,121 ("*Milnes*"). This rejection is respectfully traversed and it is submitted that these claims, in conformance with the foregoing amendment, recite subject matter which is not anticipated by and is patentable over *Milnes*.

Independent claims 1, 18, 35 and 52 have been amended hereinabove to more clearly emphasize a novel feature of the presently claimed invention, especially in view of *Milnes*. More particularly, as discussed in Part B hereinabove, control by the presently recited "control system" is based upon a portion of the first image signal corresponding to the sub-portion of the subject.

This is in contrast to the control exercised in the apparatus of *Milnes* in which external user inputs or relative movement of a foreign object within the subject are used to determine how subsequent exposure of the subject is to be performed: "user input for indicating the position of the next X-ray exposure" (*Milnes* at column 1, lines 63-64); "The X-ray image is displayed on a display device and a position is selected on the X-ray image. The X-ray generator is shifted relative to the X-ray sensor as a function of the position selected on the X-ray image." (*Milnes* at column 2, lines 7-11); and "The appearance of the first object is emphasized within the second object, movement of the first object within the second object is detected and relative position of the second object to the X-ray source is changed as a function of movement of the first object before a new display image is captured." (*Milnes* at column 2, lines 17-22).

D. Information Disclosure Statements

On April 12 and 26, 2005, Information Disclosure Statements were filed with forms listing various known prior art references. To date, copies of those forms containing the initials of the Examiner as evidence of such references having been considered have not been received. The Examiner is respectfully requested to forward those copies to the undersigned as soon as possible.

E. Conclusion

Claims 1-68 remain pending in this case. Based upon the foregoing amendment and remarks, it is respectfully submitted that these claims are allowable, and reconsideration and early allowance of these claims are requested.

Respectfully submitted,

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